

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
(Docket No. 2637)**

|                                    |   |                                 |
|------------------------------------|---|---------------------------------|
| <b>In re Application of:</b>       | ) |                                 |
|                                    | ) |                                 |
| <b>Baoquan Zhang et al.</b>        | ) |                                 |
|                                    | ) | <b>Group Art Unit 2609</b>      |
| <b>Serial No. 10/821,565</b>       | ) |                                 |
|                                    | ) | <b>Examiner: Khai N. Nguyen</b> |
| <b>Filed: April 9, 2004</b>        | ) |                                 |
|                                    | ) | <b>Confirmation No. 1278</b>    |
| <b>For: METHOD AND SYSTEM FOR</b>  | ) |                                 |
| <b>PREVENTING ENDLESS LOOPING</b>  | ) |                                 |
| <b>DURING TELEPHONE CALL SETUP</b> | ) |                                 |

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**REASONS FOR REVIEW OF FINAL REJECTION**

Applicant requests review and withdrawal of the final rejection mailed February 1, 2008, and allowance of the claims, because the Examiner has not set forth a sufficient basis for rejecting any of the claims.

Applicant respectfully requests the panel to consider the remarks set forth in Applicant's Response After Final filed April 1, 2008, the entirety of which is hereby incorporated by reference. In addition, Applicant presents the following remarks.

**1. Clear Error in § 101 Rejection of Claims 1-20**

The Examiner clearly erred in rejecting claims 1-20 as being directed to non-patentable subject matter, because each of claims 1-20 includes limitations that involve practical application in the technological arts and provide real world result, rather than being limited to an abstract idea or manipulation of an abstract idea. This is the case, even though the recited method

functions can be implemented by a computer executing *software* instructions as described in Applicant's specification.

35 U.S.C. § 101 states: "Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor . . . ."

Insofar as relevant to this application, the subject matter that the Supreme Court has found to be outside the four statutory categories of patentable subject matter (process, machine, article of manufacture, composition of matter) is limited to abstract ideas, laws of nature, and natural phenomenon. *Diamond v. Diehr*, 450 U.S. 175 (1981); *Diamond v. Charkrabarty*, 447 U.S. 303 (1980); MPEP § 2106. The leading recent case from the Federal Circuit is *In re Alappat*, 33 F.3d 1526, 1543 (Fed. Cir. 1994), which states the test for patentable subject matter as follows:

The proper inquiry in dealing with the so called mathematical subject matter exception to § 101 alleged herein is to see whether the claimed subject matter *as a whole* is a disembodied mathematical concept, whether categorized as a mathematical formula, mathematical equation, mathematical algorithm, or the like, which in essence represents nothing more than a "law of nature," "natural phenomenon" or "abstract idea." If so, [*Diamond v.*] *Diehr* precludes patenting of that subject matter.

*In re Alappat*, 33 F.3d at 1544 (emphasis original).

As held in the *Alappat* case, and reaffirmed in the *State Street Bank* case, a process which recites a mathematical algorithm or abstract idea is statutory if the claimed process is directed to a practical application of the abstract idea or mathematical algorithm in the technological arts. *State Street Bank & Trust Co. v. Signature Financial Group, Inc.* 149 F.3d 1368, 1373 (*en banc*) (Fed. Cir. 1998); MPEP § 2106, p. 2100-18 (citing *In re Alappat*, 33 F.3d 1526, 1543 (Fed. Cir. 1994)).

In this case, independent claims 1 and 14 do not claim an abstract idea, law of nature, or natural phenomenon, or disembodied mathematical concept. Rather, each of these claims recites a method that includes practical, real-world-effect elements such as receiving a request to set up a call, providing a request that includes a non-loop parameter to indicate that call setup signal has already occurred to the service node and thus to help avoid endless looping of call setup signaling, detecting the non-loop parameter, and in response to at least the non-loop parameter, directing a switch to set up the call. As such, the claims in no way recite a law of nature, abstract idea or natural phenomenon, or mere manipulation of data. Instead, properly considering each claim as a whole, the claims recite functions that involve practical application in the telecommunication field and that achieve the real-world effect of directing a switch to set up a call, with the advantage of avoiding endless looping of call setup signaling. Under the precedent of *Diamond v. Diehr*, *Alappat*, and *State Street*, the claims clearly pass muster under § 101. Therefore, the Examiner clearly erred in rejecting claims 1-20 as being non-statutory.

Furthermore, the Examiner also clearly erred in rejecting claims 2-3 and 15-16 under § 101 as being non-statutory, because claims 2-3 and 15-16 each depend from one of claims 1 and 14, which clearly recite statutory subject matter as explained above. The fact that claims 2-3 and 15-16 add additional processing functions does not *take away* the fact that the claims, when *properly considered as a whole* (including the elements of their parent claims), are directed to patentable subject matter, rather than to an abstract idea, law of nature, or natural phenomenon, or disembodied mathematical concept.

## **2. Clear Error in § 102 and § 103 Rejections**

As explained in the Response After Final, the Examiner clearly erred in rejecting claims 1-2, 4-8, 11-15, and 17-25 as being allegedly anticipated by McConnell, because McConnell

does not disclose the combination of elements of any of these claims. At a minimum, McConnell fails to teach providing and using a non-loop parameter as claimed.

For instance, McConnell fails to teach the second request including . . . a non-loop parameter to indicate that call setup signaling has already occurred to the service node and thus to help avoid endless looping of call setup signaling to the service node ... and detecting the non-loop parameter ... at the service control point and, in response to at least the non-loop parameter, directing the switch to set up the call to the subscriber station" as in claim 1. Further, McConnell fails to teach "wherein the second request comprises ... a non-loop parameter to indicate that call setup signaling has already occurred to the SN and thus to help avoid endless looping of call setup signaling to the SN ... and detecting the non-loop parameter in the second query at the SCP, and responsively sending, from the SCP to the switch, a directive to set up the call to the subscriber station rather than to the SN" as in claim 14. And McConnell fails to teach "including in the second request ... a non-loop parameter to indicate that call setup signaling has already occurred to the SN and thus to help avoid endless looping of call setup signaling to the SN, wherein the service logic of the SCP comprises instructions for recognizing the non-loop parameter in the second request and further instructions for responsively providing guidance to the switch to set up the call to the subscriber station rather than again to the SN" as in claim 21.

The portions of McConnell that the Examiner cited do not disclose anything that would function as a non-loop parameter to indicate that call setup signaling has already occurred to the service node as recited in Applicant's claims. For example, the Examiner asserted that McConnell's teaching of a "service code" somehow constitutes the claimed non-loop parameter. And in the Advisory Action, the Examiner asserted that McConnell teaches providing a service code that causes routing on a looparound trunk. However, McConnell does not teach that that the service code indicates that call setup signaling has already occurred the service node or that

an SCP somehow responds to at least the service code by directing the switch to set up the call to a subscriber station as in claims 14 and 21. Indeed, in McConnell, it is the SCP that *provides* the service code, so the latter interpretation would not make sense.

The Examiner's citations to other portions of McConnell as allegedly teaching or relating to use of a non-loop parameter as in the present claims are also clearly erroneous, as explained in the Response After Final. A review of the cited portions of McConnell and of McConnell as a whole reveals no teaching of use of a non-loop parameter as presently claimed.

Since McConnell fails to teach use of a non-loop parameter as in the independent claims, McConnell fails to anticipate the independent claims. Therefore, the Examiner clearly erred in rejecting the independent claims as being anticipated by McConnell, and so the independent claims should be allowed. Further, the dependent claims should be allowed for at least the reason that they depend from the allowable independent claims.

### **3. Conclusion**

For the foregoing reasons as well as the reasons set forth in the Response After Final, Applicant submits that the Examiner has clearly erred in rejecting the claims. Therefore, Applicant respectfully requests the panel to withdraw the rejections and to direct that a notice of allowance be mailed.

Respectfully submitted,

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Dated: June 2, 2008

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